

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A method comprising:
determining whether execution of an instruction of a first thread ~~may require~~ potentially causes a long latency; and
switching to a second thread ~~if the instruction may require the long latency based on the determination, and executing one or more instructions of the second thread.~~

Claim 2 (original) The method of claim 1, further comprising executing at least one additional instruction in the first thread while preparing to switch to the second thread.

Claim 3 (original) The method of claim 1, wherein the determining is based on a stochastic analysis of whether the instruction will result in a long latency.

Claim 4 (currently amended) The method of claim 1, wherein the determining comprises applying the instruction to a lookup table in a processor pipeline, the lookup table including entries corresponding to predetermined conditions.

Claim 5 (currently amended) The method of claim 4, further comprising providing a feedback signal from an instruction decoder to an instruction fetch unit to switch to the second thread if the instruction matches an entry in the lookup table.

Claim 6 (original) The method of claim 1, wherein the long latency comprises less than ten processor cycles.

Claim 7 (cancel)

Claim 8 (currently amended) A method comprising:
switching from a first thread to a second thread if a condition that ~~may potentially result~~ results in a stall of a processor pipeline occurs during execution of the first thread in the processor pipeline, and executing at least one instruction of the second thread.

Claim 9 (original) The method of claim 8, further comprising determining whether the condition occurs by comparing an instruction to entries in a lookup table.

Claim 10 (currently amended) The method of claim 8, further comprising executing at least one additional instruction in the first thread after the condition occurs and before switching to the second thread.

Claim 11 (original) The method of claim 8, wherein the condition is based on a stochastic model.

Claim 12 (original) The method of claim 8, further comprising providing a feedback signal from an instruction decoder to an instruction fetch unit to switch to the second thread.

Claim 13 (currently amended) An article comprising a machine-readable storage medium containing instructions that if executed enable a system to:

switch from a first thread to a second thread if a condition that ~~may potentially result~~ results in a stall of a processor pipeline occurs during execution of the first thread in the processor pipeline, and execute at least one instruction of the second thread.

Claim 14 (original) The article of claim 13, further comprising instructions that if executed enable the system to determine whether the condition occurs by comparing an instruction to entries in a lookup table.

Claim 15 (original) The article of claim 13, further comprising instructions that if executed enable the system to execute at least one additional instruction in the first thread while the system prepares to switch to the second thread.

Claim 16 (original) The article of claim 13, further comprising instructions that if executed enable the system to send a feedback signal to cause the switch from the first thread to the second thread.

Claim 17 (currently amended) An apparatus comprising:
a processor pipeline having a feedback loop coupled between a first pipeline stage and a second pipeline stage to provide a feedback signal from the second pipeline stage back to the first pipeline stage to cause the processor pipeline to switch from a first thread to a second thread, the feedback signal to originate from a location in the processor pipeline before instruction execution.

Claim 18 (original) The apparatus of claim 17, wherein the feedback signal is coupled between an instruction decoder and an instruction fetch unit.

Claim 19 (original) The apparatus of claim 18, wherein the instruction decoder is coupled to provide the feedback signal to the instruction fetch unit when a predetermined condition occurs.

Claim 20 (original) The apparatus of claim 19, wherein the instruction decoder includes logic to determine when the predetermined condition occurs.

Claim 21 (currently amended) The apparatus of claim 19, wherein the instruction decoder includes a lookup table ~~that includes~~ to store a list of predetermined conditions to which an instruction is compared.

Claim 22 (currently amended) A system comprising:
a processor pipeline having a feedback loop coupled to provide a feedback signal from an instruction decoder to an instruction fetch unit to cause the processor pipeline to switch from a first thread to a second thread, the feedback signal to originate from a location in the processor pipeline before instruction execution; and
a wireless interface coupled to the processor pipeline via a bus.

Claim 23 (original) The system of claim 22, further comprising at least one storage device to store code to enable the processor pipeline to switch from the first thread to the second thread if a predetermined condition occurs during execution of the first thread.

Claim 24 (original) The system of claim 23, wherein the at least one storage device includes code to enable the processor pipeline to execute at least one additional instruction in the first thread while the system prepares to switch to the second thread.

Claim 25 (original) The system of claim 22, wherein the feedback signal is coupled between an instruction decoder and an instruction fetch unit.

Claim 26 (original) The system of claim 25, wherein the instruction decoder is coupled to provide the feedback signal to the instruction fetch unit when a predetermined condition occurs.

Claim 27 (original) The system of claim 26, wherein the instruction decoder includes logic to determine when the predetermined condition occurs.

Claim 28 (currently amended) The system of claim 26, wherein the instruction decoder includes a lookup table that includes a list of predetermined conditions to which an instruction is applied.

Claim 29 (original) The system of claim 22, wherein the wireless interface comprises a dipole antenna.

Claim 30 (new) The method of claim 4, wherein the predetermined conditions comprise instruction types.